

## WHAT IS CLAIMED IS:

1. A processing server (10) for allocating user terminals (8) resources of a local area network (WLAN), which server is adapted to be connected to at least one local area  
5 network access point (1) and is characterized in that it includes control means (11) adapted: i) to classify the terminals (8) into a first group or a second group according to whether or not they are adapted to establish with said local area network (WLAN) communications  
10 encrypted in accordance with at least one format and ii) to allocate resources of said local area network (WLAN) to terminals (8) attempting to establish communication therewith as a function of whether they are classified in said first group or said second group.
- 15 2. A server according to claim 1, characterized in that said control means (11) are adapted to determine the MAC address of each terminal (8) attempting to establish communication with said local area network (WLAN) and in  
20 that it includes means (12) for allocating an IP address to the terminal (8) having the MAC address determined in this way.
- 25 3. A server according to claim 2, characterized in that said allocation means (12) are of the DHCP type.
- 30 4. A server according to claim 2, characterized in that it includes a memory (13) for storing a table containing primary MAC addresses associated with first terminals (8a) adapted to exchange data frames encrypted in accordance with said format.
- 35 5. A server according to claim 4, characterized in that said table contains secondary MAC addresses associated with second terminals (8b) adapted to exchange unencrypted data frames.

6. A server according to claim 4, characterized in that said control means (11) are adapted to determine if a MAC address extracted from a received frame is a primary or secondary MAC address and, if so, to send the allocation means (12) a request to allocate the terminal (8b) corresponding to said primary or secondary MAC address a primary IP address so that it can set up a link with at least one first remote network and one second remote network and, if not, to send the allocation means (12) a request to allocate the terminal (8c) corresponding to said MAC address, referred to as a third terminal, a secondary IP address so that it can set up a connection with at least one second remote terminal.

15 7. A server according to claim 4, characterized in that said first terminals (8a) are associated with said first remote network.

20 8. A server according to claim 7, characterized in that said terminals (8b) belong to known users of said first remote network.

25 9. A server according to claim 6, characterized in that each first remote network is selected from the group comprising private networks, IP data networks, and public switched telephone networks (PSTN), and in that each second remote network is selected from the group comprising IP data networks and public switched telephone networks (PSTN).

30 10. A server according to claim 1, characterized in that said control means (11) are adapted to allocate at least two priority levels for allocation of resources of the local area network (WLAN) according to whether communications are encrypted in accordance with said chosen format or not.

11. A server according to claim 10, characterized in that the MAC addresses in said table are stored in corresponding relationship to at least one priority level.

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12. A server according to claim 11, characterized in that said priority levels comprise at least one first priority level allocated to first terminals (8a) associated with primary MAC addresses and one second priority level allocated to second terminals (8b) associated with secondary MAC addresses.

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13. A server according to claim 12, characterized in that said control means (11) are adapted to allocate a third priority level for allocation of resources of the local area network to said third terminals (8c) setting up communications not encrypted in accordance with said chosen format and whose MAC address is not in said table.

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20 14. A server according to claim 11, characterized in that said priority levels apply at least to a bandwidth and said bandwidth decreases from the first level to the third level.

25 15. A server according to claim 14, characterized in that said control means (11) send said access point (1) data representative of said bandwidth assigned to a designated terminal (8) and said access point allocates the corresponding resources to said designated terminal.

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16. A server according to claim 10, characterized in that said control means (11) are adapted to modify an allocated priority level as a function of the available resources of said local area network (WLAN).

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17. A server according to claim 1, characterized in that it is adapted to be connected to said local area network

(WLAN) by a cable connection (3).

18. A server according to claim 17, characterized in that said cable connection (3) is an Ethernet link.

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19. A server according to claim 1, characterized in that it is adapted to be connected to said local area network (WLAN) by a radio link.

10 20. A server according to claim 19, characterized in said radio link is a 802.11b radio link.

15 21. A router (2), characterized in that it includes a processing server (10) according to any one of the preceding claims.

22. A local area network access point, characterized in that it includes a processing server (10) according to any one of claims 1 to 20.

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23. A communication installation including at least one local area network (WLAN) accessible via at least one access point (1), at least one first remote network, and at least one second remote network, which installation is characterized in that it includes a processing server (10) according to any one of claims 1 to 20 connected to said access point (1) and to said first and second remote networks.

30 24. An installation according to claim 23, characterized in that said local area network (WLAN) is a wireless local area network.

35 25. An installation according to claim 23, characterized in that said processing server (10) is connected to said first remote network (CN) via a virtual private network (VPN).

26. An installation according to claim 23, characterized in that said processing server (10) is connected to said first remote network (CN) via a remote access server.

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27. An installation according to claim 23, characterized in that each first remote network is chosen from the group comprising private networks, IP data networks, and public switched telephone networks (PSTN) and in that 10 each second remote network is selected from the group comprising IP data networks and public switched telephone networks (PSTN).

28. A method of allocating resources of a local area 15 network (WLAN) to user terminals (8) via at least one access point (1) to said local area network, which method is characterized in that it consists in: i) in the case of an attempt at setting up a connection with said local area network (WLAN) by a terminal (8), classifying said 20 terminal in a first group or a second group according to whether said connection is encrypted in accordance with at least one format or not, and ii) allocating resources of said local area network (WLAN) to said terminal (8) as a function of whether it is classified in said first 25 group or said second group.

29. A method according to claim 28, characterized in that in the event of an attempt by a terminal (8) to set up a connection with said local area network (WLAN), its MAC 30 address is determined and an IP address is then allocated to the terminal having the MAC address determined in this way.

30. A method according to claim 29, characterized in that 35 a table is provided containing primary MAC addresses associated with first terminals (8a), adapted to exchange data frames encrypted in accordance with said chosen

format.

31. A method according to claim 30, characterized in that  
said table contains secondary MAC addresses associated  
5 with second terminals (8b) adapted to exchange  
unencrypted data frames.

32. A method according to claim 30, characterized in that  
it determines if a MAC address extracted from a received  
10 frame is a primary or secondary MAC address and, if so,  
it allocates the terminal (8a, 8b) corresponding to said  
primary or secondary MAC address a primary IP address so  
that it can set up a connection with at least one first  
remote network and one second remote network and, if not,  
15 it allocates the terminal (8c) corresponding to said MAC  
address, referred to as a third terminal, a secondary IP  
address so that it can set up a connection with a least  
one second remote network.

20 33. A method according to claim 30, characterized in that  
said first terminals (8a) are associated with said first  
remote network.

34. A method according to claim 33, characterized in that  
25 said second terminals (8b) belong to known users of said  
first remote network.

35. A method according to claim 32, characterized in that  
each first remote network is selected from the group  
30 comprising private networks, IP data networks, and public  
switched telephone networks (PSTN) and in that each  
second remote network is selected from the group  
comprising IP data networks and public switched telephone  
networks (PTSN).  
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36. A method according to claim 28, characterized in that  
at least two levels of priority for allocation of

resources of the local area network are allocated according to whether communications are encrypted in accordance with said chosen format or not.

5 37. A method according to claim 36, characterized in that the MAC addresses in said table are stored in corresponding relationship to at least one priority level.

10 38. A method according to claim 37, characterized in that the priority levels comprise at least one first priority level allocated to first terminals (8a) associated with primary MAC addresses and at least one second priority level allocated to second terminals (8b) associated with 15 secondary MAC addresses.

20 39. A method according to claim 38, characterized in that a third priority level for allocation of resources of the local area network is allocated to said third terminals (8c) setting up communications that are not encrypted in accordance said format and whose MAC address is not in said table.

25 40. A method according to claim 36, characterized in that said priority levels relate at least to a bandwidth and said bandwidth decreases from the first level to the third level.

30 41. A method according to claim 40, characterized in that said access point (1) is sent data representative of the bandwidth assigned to a designated terminal (8) and said access point (1) allocates the corresponding resources to said designated terminal.

35 42. A method according to claim 36, characterized in that an allocated priority level is modified as a function of the available resources of said local area network

(WLAN) .

43. Use of a method, a router, an access point, a processing server and an installation according to any 5 one of the preceding claims in communication networks selected from the group comprising PSTN, PLMN and Internet (IP) public networks and PABX private networks and private communication gateways.

10 44. Use according to claim 43, characterized in that the PLMN public networks are mobile networks selected from the group comprising GSM, GPRS and UMTS networks.